

Office Memorandum • UNITED STATES GOVERNMENT

TO : Deputy Chief, Photo Intelligence Division *65* DATE: 17 December 1957

FROM : Acting Chief, Special Projects Branch

SUBJECT: Plotting on WACs vs Plotting on 1:250,000 Maps

The average mission when plotted on WACs will involve approximately ten plots. Using ten WAC plots as an example of an average mission the following factors would enter into play if plotting were to be done on 1:250,000 maps:

a. Number of Sheets Involved

If 1:250,000 sheets were used, as many as 160 plot sheets would be needed instead of ten.

b. Drafting

Since the page sizes of a WAC and of a 1:250,000 map are about the same, the time needed for drafting could multiply as much as 16 times.

c. Reproduction (labor time, labor cost)

The amount of time needed for reproduction could delay distribution. The labor cost could increase by as much as 16 times.

d. Materials (foils)

The number of foils needed could multiply by as much as 16 times. A mission involving ten WACs requires a total of 150 foils at \$1.00 per sheet to complete the distribution under our present system. If 1:250,000 maps were used on our sample mission, it could involve as many as 2,400 foils at a cost of \$1.00 each, which is a considerable increase in the cost of foil alone.

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e. Security

Instead of handling 150 pieces of classified material, 2,400 pieces of material would have to be handled during distribution.

f. Bookkeeping (distribution)

This task would involve more time and expense.

g. Storage and Transfer

The storage of a large number of plots could become a real problem, especially for recipients of the plots who have only a limit amount of flat storage space.

h. Scale Transfer for Preparation of Elint Plots

Elint plots are prepared and keyed to WAC charts; should photography be plotted on 1:250,000 sheets it would take an estimated 32 hours per mission to preform the scale transfer alone.

i. Map Availability

✓ The entire USSR - in fact all land areas of the world - are covered by WAC charts. Approximately 84 percent of the USSR is without 1:250,000 coverage. This of course means that on occasion it would be necessary to go back to the WACs. Would this mean plotting part of a mission on 1:250,000 and part of it on WACs?

j. Size of 1:250,000 Maps

Since 1:250,000 coverage is published by different agencies, the geographical sheet size etc. is going to vary. Which of course means that on one mission alone

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numerous types of maps may be involved. This presents an additional problem of having to stock pre-cut and pre-printed paper to meet the needs of the individual type sheets.

k. USAF Standard Indexing System

Under the USAF Standard Indexing System Aeronautical Approach Charts (scale of 1:250,000) are used as base charts whenever possible. If not available, the best Lambert Conformal 1:250,000 scale map is used, or a photographic reduction or projection to a scale of 1:250,000 of the best chart or map available of the area is used. This procedure not only involves a great deal of work, but is time consuming and certainly not possible for tactical situation.

l. General

The utilization of 1:250,000 maps for a plotting base is quite feasible for operations of a limited or controlled nature, involving conventional reconnaissance flights of 100 - 200 exposures, or control mapping flights of "block" areas. But it seems impractical to adapt this system to an operation covering a large area with thousands of exposures, and using unconventional equipment. Consider the "B" configuration with a usable sweep of more than 60 miles. This would mean making a sheet mosaic of maps in order to plot, for all practical purposes, every sweep, since a template for the "B" configuration would be approximately 32" wide. The time involved in doing this during the plotting stage, plus the inconvenience of using such a system of indexing is certainly concrete evidence that the WAC is without question, the most suitable base on which to key plots of this type of photography.

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